What is claimed is:

1   1.   A method for use in a wireless communication system, comprising:

2   determining symbol error rates for antennas in a group of antennas; and

3   selecting an antenna from the group of antennas for use in subsequent wireless

4   communication based on the symbol error rates.

1   2.   The method of claim 1, wherein:

2   selecting an antenna includes selecting an antenna that has a lowest symbol error

3   rate.

1   3.   The method of claim 1, wherein:

2   said symbol error rates include average symbol error rates.

1   4.   The method of claim 3, wherein:

2   said wireless communication system is a multicarrier system; and

3   said average symbol error rates are averaged over a plurality of sub-carriers.

1   5.   The method of claim 4, wherein:

2   determining symbol error rates includes determining an average symbol error

3   rate for a first antenna by summing symbol error probabilities corresponding to multiple

4   sub-carriers associated with said first antenna.

1   6.   The method of claim 4, wherein:

2   determining symbol error rates includes determining an average symbol error

3   rate for a first antenna by estimating a sum of symbol error probabilities corresponding

4   to multiple sub-carriers associated with said first antenna using an error probability

5   between two closest signal constellation points.

1   7.   The method of claim 4, wherein:

2   said wireless communication system uses orthogonal frequency division

3   multiplexing (OFDM).

1   8.   The method of claim 3, wherein:

2   said wireless communication system is a code division multiple access (CDMA)

3   based system; and

4   said average symbol error rates are averaged over a plurality of codes.

1   9.   An apparatus comprising:

2   an antenna switch to controllably couple one of a plurality of antennas to a

3   wireless communication circuit; and

4   a switch controller to select an antenna from said plurality of antennas to be

5   coupled to said wireless communication circuit for use in supporting wireless

6   communication based on symbol error rates associated with antennas in said plurality of

7   antennas.

1   10.   The apparatus of claim 9, wherein:

2   said switch controller includes an error estimator to estimate said symbol error

3   rates associated with said antennas.

1   11.   The apparatus of claim 9, wherein:

2   said symbol error rates are average symbol error rates.

1   12.   The apparatus of claim 11, wherein:

2   said wireless communication circuit supports multicarrier communication; and

3   said average symbol error rates are averaged over a plurality of sub-carriers.

1 13. The apparatus of claim 12, wherein:

2   said switch controller includes an error estimator to determine an average

3 symbol error rate for a first antenna by summing symbol error probabilities

4 corresponding to multiple sub-carriers associated with said first antenna.

1 14. The apparatus of claim 11, wherein:

2   said wireless communication circuit supports code division multiple access

3 (CDMA); and

4   said average symbol error rates are averaged over a plurality of codes.

1 15. The apparatus of claim 9, wherein:

2   said switch controller generates a switch control signal for said antenna switch.

1 16. The apparatus of claim 9, wherein:

2   said switch controller selects an antenna having a lowest average symbol error

3 rate.

1 17. The apparatus of claim 9, wherein:

2   said wireless communication circuit includes a wireless transmitter.

1 18. The apparatus of claim 9, wherein:

2   said wireless communication circuit includes a wireless receiver.

1 19. The apparatus of claim 9, wherein:

2   said wireless communication circuit includes a wireless transceiver.

1 20. A system comprising:

2   a plurality of antennas that includes at least one dipole antenna;

3   an antenna switch to controllably couple one of said plurality of antennas to a

4 wireless communication circuit; and

5   a switch controller to select an antenna from said plurality of antennas to be

6   coupled to said wireless communication circuit for use in supporting wireless

7   communication based on symbol error rates associated with antennas in said plurality of

8   antennas.

1   21.   The system of claim 20, wherein:

2   said switch controller includes an error estimator to estimate said symbol error

3   rates associated with said antennas.

1   22.   The system of claim 20, wherein:

2   said symbol error rates are average symbol error rates.

1   23.   The system of claim 20, wherein:

2   said wireless communication circuit supports multicarrier wireless

3   communication; and

4   said average symbol error rates are averaged over a plurality of sub-carriers.

1   24.   The system of claim 20, wherein:

2   said wireless communication circuit supports code division multiple access

3   (CDMA); and

4   said average symbol error rates are averaged over a plurality of codes.

1   25.   The system of claim 20, wherein:

2   said system is part of a wireless access point.

1   26.   The system of claim 20, wherein:

2   said system is part of a wireless network interface card (NIC).